CLAIMS

1. A frame-cyclic noise reduction method employed for an image display device in which one field is divided into a plurality of sub-fields each of which has a predetermined weight of luminance, and turned-on sub-fields are properly combined to provide image with gradation, the frame-cyclic noise reduction method comprising:

detecting an area where an edge portion of an image becomes unclear, i.e., where sub-field fuzziness becomes worse; and

controlling a cyclic amount for the area in which the sub-field fuzziness becomes worse so as to be different from a cyclic amount for other areas.

2. The frame-cyclic noise reduction method of Claim 1, wherein a movement amount is detected according to a differential signal calculated as a difference between a current-frame image signal and a one-frame-before image signal, and the cyclic amount is decreased as the movement amount increases in the area where the sub-field fuzziness becomes worse or in other areas.

3. The frame-cyclic noise reduction method of Claim 2, wherein a cyclic amount corresponding to a movement amount in the area where the sub-field fuzziness becomes worse is determined to be equal to, or to be smaller than the cyclic amount for areas other than the area where the sub-field fuzziness becomes worse.

4. The frame-cyclic noise reduction method of Claim 1, wherein the area where the sub-field fuzziness becomes worse is included in an area in which an image signal level decreases along a moving direction of image when sub-fields constituting the one field are arranged in an ascending order of weight of

luminance, whereas the area where the sub-field fuzziness becomes worse is included in an area in which an image signal level increases along a moving direction of image when the sub-fields constituting the one field are arranged in a descending order of weight of luminance.

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5. A frame-cyclic noise reduction device employed for an image display device in which one field is divided into a plurality of sub-fields each of which has a predetermined weight of luminance, and turned-on sub-fields are properly combined to provide image with gradation, the device comprising:

10 a luminance change area detector for detecting an area where an edge portion of an image becomes unclear, i.e., where sub-field fuzziness becomes worse;

a movement amount detector for detecting a movement amount of an image according to a differential signal calculated as a difference between a
15 current-frame image signal and a one-frame-before image signal; and

a cyclic amount determining section for determining a cyclic amount according to outputs from the luminance change area detector and the movement amount detector,

wherein, the cyclic amount determining section contains at least two
20 translation tables for translating from the movement amount to the cyclic amount, and selects one from the translation tables according to the output from the luminance change area detector.